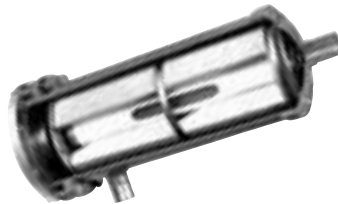


Sporlan Refrigeration Specialties

OEM Aftermarket Products





Contents

Thermostatic Expansion Valves	4
Solenoid Valves	8
Catch-All® Filter Driers Liquid & Suction Line	10
Cores and Filter Elements	14
Reversible Heat Pump Filter-Driers	15
Suction Filters	16
See All® Moisture & Liquid Indicators	19
Discharge Bypass Valves	21

Thermostatic Expansion Valves

Specifications

Type-RIVE

Element Size No. 43, Knife Edge Joint, Standard Tubing Length 30 Inches



Refrigerant (Sporlan Code)	Type & Capacity		Thermostatic Charges Available	Standard Connections - Inches ODF Solder	
	External Equalizer Only			Inlet	Outlet
	SF Item #	Mfg. #			
22 (V)	VAL08063	RIVE-2-GA-RPB	GA only	3/8	1/2
22 (V)	VAL08064	RIVE-3-GA-RPB	GA only	3/8	1/2
22 (V)	VAL08065	RIVE-4-GA-RPB	GA only	1/2	1/2
22 (V)	VAL08066	RIVE-5-GA-RPB	GA only	1/2	5/8

The 2 through 5 ton versions of this valve are with the rapid pressure balance (RPB) feature for off cycle pressure equalization.

Type-RC

Balanced Port Construction

R-22 Element Size No. 43, Knife Edge Joint, Standard Tubing Length 30 Inches

R-410A Element Size No. 45, Knife Edge Joint, Standard Tubing Length 30 Inches



Refrigerant (Sporlan Code)	Type & Capacity		Thermostatic Charges Available	Standard Connections - Inches ODF Solder	
	External Equalizer Only			Inlet	Outlet
	SF Item #	Mfg. #			
22 (V)	VAL08080	RCVE-2	GA only	3/8	1/2
22 (V)	VAL08081	RCVE-3	GA only	3/8	1/2
22 (V)	VAL08082	RCVE-4	GA only	1/2	1/2
22 (V)	VAL08083	RCVE-5	GA only	1/2	5/8
22 (V)	VAL08084	RCVE-6	GA only	1/2	5/8
410A (Z)	VAL08085	RCZE-2	GA only	3/8	1/2
410A (Z)	VAL08086	RCZE-3	GA only	3/8	1/2
410A (Z)	VAL08087	RCZE-4	GA only	1/2	1/2
410A (Z)	VAL08088	RCZE-5	GA only	1/2	5/8
410A (Z)	VAL08089	RCZE-6	GA only	1/2	5/8

Type-S

Element Size No. 83, Knife Edge Joint, Standard Tubing Length 5 Feet



Refrigerant (Sporlan Code)	Type & Capacity				Standard Connections - Inches ODF Solder	
	External Equalizer Only				Inlet	Outlet
	GA Charge		CP100 Charge			
	SF Item #	Mfg. #	SF Item #	Mfg. #		
22 (V)	VAL08067	SVE-2	VAL00960	SVE-2	1/2	5/8
22 (V)	VAL00277	SVE-3	VAL00961	SVE-3	1/2	5/8
22 (V)	VAL08068	SVE-4	VAL00964	SVE-4	1/2	7/8
22 (V)	VAL08069	SVE-5	VAL00962	SVE-5	1/2	7/8
22 (V)	VAL08070	SVE-8	VAL00963	SVE-8	5/8	7/8
22 (V)	VAL08071	SVE-10	VAL08072	SVE-10	5/8	7/8

Thermostatic Expansion Valves

Type-EBS

Balanced Port Construction

Element Size No. 83, Knife Edge Joint, Standard Tubing Length 5 Feet



Refrigerant (Sporlan Code)	Type & Capacity				Standard Connections - Inches Extended ODF Solder	
	External Equalizer Only				Inlet	Outlet
	GA Charge		CP100 Charge			
	SF Item #	Mfg. #	SF Item #	Mfg. #		
22 (V)	VAL08090	EBSVE-8	VAL08092	EBSVE-8	5/8	7/8
22 (V)	VAL08091	EBSVE-11	VAL08093	EBSVE-11	5/8	7/8

Type-O

Balanced Port Construction

Element Size Nos. 83 and 33, Knife Edge Joint, Standard Tubing Length 5 Feet

U.S. Patent Number 3,742,722



Refrigerant (Sporlan Code)	Type & Capacity				Element Size Number	Standard Connections - Inches ODF Solder	
	External Equalizer Only					Inlet	Outlet
	GA Charge		CP100 Charge				
	SF Item #	Mfg. #	SF Item #	Mfg. #			
22 (V)	VAL04150	OVE-15	VAL08205	OVE-15	83	7/8	1-1/8
22 (V)	VAL04148	OVE-20	VAL08206	OVE-20	83	7/8	1-3/8
22 (V)	VAL03373	OVE-30	VAL08221	OVE-30	83	1-1/8	1-3/8
22 (V)	VAL07234	OVE-40	VAL08220	OVE-40	33	1-1/8	1-3/8
22 (V)	VAL07235	OVE-55	VAL08061	OVE-55	33	1-1/8	1-3/8
22 (V)	VAL08204	OVE-70	VAL08062	OVE-70	33	1-1/8	1-3/8

Type-V

Semi-Balanced Port Construction

Element Size No. 63, Gasket Joint, Standard Tubing Length 5 Feet - Flange Ring Size - 1.75" OD x 1.25" ID

U.S. Patent Number 3,742,722



Refrigerant (Sporlan Code)	Type & Capacity				Standard Connections - Inches ODF Solder	
	External Equalizer Only				Inlet	Outlet
	GA Charge		CP100 Charge			
	SF Item #	Mfg. #	SF Item #	Mfg. #		
22 (V)		VVE-52	VAL00873	VVE-52	1-3/8	1-3/8
22 (V)	VAL08073	VVE-70	VAL08075	VVE-70	1-3/8	1-3/8
22 (V)	VAL08074	VVE-100	VAL08076	VVE-100	1-3/8	1-3/8

Thermostatic Expansion Valves

Type-W

Semi-Balanced Port Construction

Element Size No. 63 and No. 7, Gasket Joint Standard Tubing Length 10 Feet - Flange Ring Size - 2.75" OD x 2.19" ID

U.S. Patent Number 3,742,722



Refrigerant (Sporlan Code)	Type & Capacity				Element Size Number	Standard Connections - Inches ODF Solder	
	External Equalizer Only					Inlet	Outlet
	GA Charge		CP100 Charge				
	SF Item #	Mfg. #	SF Item #	Mfg. #			
22 (V)	VAL08077	WVE-135	VAL08078	WVE-135	63	1-5/8	2-1/8
22 (V)	VAL08079	WVE-180			7	1-5/8	2-1/8

TEV Replacement Elements			
Item Descriptions			
SF Item #	Mfg. #	SF Item #	Mfg. #
HED00766	KT-43-VGA 30"	HED00768	KT-43-VCP100 30"
HED00758	KT-44-VGA 30"	HED00691	KT-43-VCP100 60"
HED00119	KT-33-VGA 60"	HED00120	KT-33-VCP100 60"
HED00115	KT-53-VGA 60"	HED00116	KT-53-VCP100 60"
HED00117	KT-83-VGA 60"	HED00118	KT-83-VCP100 60"
HED00767	KT-63-VGA 10'	HED00672	KT-63-VCP100 10'

Thermostatic Expansion Valves

Capacities For Refrigerants Tons Of Refrigeration

Air conditioning and heat pump applications

Valve Types	Nominal Capacity	Refrigerant	
		22	410A
		Recommended Thermostatic Charges	
		VCP100, VGA	N, ZGA
		Evaporator Temperature (°F)	
		40°	40°
RI	1	1.17	—
RI	2	2.14	—
RI	3	3.40	—
RI	4	4.18	—
RI	5	4.52	—
RC	2	2.30	2.76
RC	3	3.20	3.83
RC	4	4.20	5.03
RC	5	5.00	5.99
RC	6	6.01	7.20
EBS	8	8.51	—
EBS	11	11.5	—
O	15	15.0	—
O	20	22.2	—
O	30	30.5	—
O	40	40.3	—
O	55	55.0	—
O	70	73.0	—
S	2	2.00	—
S	3	3.20	—
S	4	4.50	—
S	5	5.20	—
S	8	8.00	—
S	10	10.00	—
V	52	52.0	—
V	70	73.0	—
V	100	100	—
W	135	143	—
W	180	180	—

Refrigerant	Liquid Temperature Entering TEV (°F)								
	60°	70°	80°	90°	100°	110°	120°	130°	140°
	Correction Factor, CF Liquid Temperature								
22	1.23	1.17	1.12	1.06	1.00	0.94	0.88	0.82	0.76
410A	1.32	1.24	1.16	1.08	1.00	0.92	0.83	0.73	0.62

These factors include corrections for liquid refrigerant density and net refrigerating effect and are based on an evaporator temperature of 40°F.

Refrigerant	Liquid Temperature Entering TEV (°F)									
	75	100	125	150	160	175	200	225	250	275
	Correction Factor, CF Liquid Temperature 40°F Evaporator Temperature									
22	.87	1.00	1.12	1.22	—	1.32	1.41	1.50	1.58	1.66
410A	.68	.79	.88	.97	1.00	1.05	1.12	1.19	1.25	1.31

TEV capacity = TEV rating x CF liquid temperature x CF pressure drop —
Example: Calculate the actual capacity of a nominal 2 ton, R-22, Type RC valve at 40°F evaporator, 80°F liquid temperature entering the TEV, and 75 psi pressure drop across the TEV:

$$\begin{aligned}
 \text{TEV capacity} &= 2.30 \text{ (from rating chart)} \\
 &\quad \times 1.12 \text{ (CF liquid temperature)} \\
 &\quad \times 0.87 \text{ (CF pressure drop)} \\
 &= 2.24 \text{ tons}
 \end{aligned}$$

Solenoid Valves



E10S250

Features and Benefits

- Molded coil for most sizes.
- Class "F" temperature rating – Coil types MKC-1, OMKC-1, MKC-2, and OMKC-2.
- Extremely rugged, simple design – few parts.
- "E" Series may be brazed without disassembly.
- Tight closing through use of synthetic seating material.
- Can be used with Refrigerant 22.

The Sporlan "E" series solenoid valves feature extended solder type connections as standard. One important

benefit to the user is that all valves in the "E" series can be installed without disassembly using either low or no silver content brazing alloy.

All Sporlan solenoid valves are designed for liquid, suction and discharge gas applications.

Most Sporlan Solenoid Valves are Listed by Underwriters' Laboratories, Inc. – Guide No. Y10Z – File No. MH4576 and Canadian Standards Association – Guide 440-A-O, Class 3221, File 19953 and CE provisions of the LVD 72/23/EEC.

Liquid Capacity Selection Table

Type Number	Tons Of Refrigeration														
	22					134a					404A				
"E" Series Valves	Pressure Drop – psi*														
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
E3	0.9	1.3	1.6	1.9	2.1	0.8	1.2	1.5	1.8	2.0	0.6	0.9	1.1	1.2	1.4
E5	1.6	2.3	2.8	3.3	3.6	1.5	2.1	2.6	3.0	3.4	1.1	1.5	1.9	2.1	2.4
(M)E6	2.9	4.0	4.9	5.7	6.4	2.7	3.8	4.6	5.3	5.9	1.9	2.7	3.3	3.8	4.2
(M)E9	4.7	6.6	8.1	9.3	10.4	4.4	6.2	7.5	8.7	9.7	3.1	4.4	5.4	6.2	6.9
(M)E10	6.4	9.1	11.1	12.8	14.3	6.0	8.5	10.4	12.0	13.4	4.2	6.0	7.3	8.5	9.5
(M)E14	9.1	12.9	15.8	18.2	20.3	8.5	12.0	14.7	17.0	18.9	6.0	8.5	10.4	12.0	13.4
(M)E19	13.9	19.8	24.2	28.0	31.4	13.0	18.4	22.6	26.1	29.2	9.2	13.1	16.0	18.5	20.7
(M)E25	23.8	33.8	41.4	47.8	53.5	22.2	31.5	38.6	44.6	49.9	15.7	22.3	27.4	31.6	35.4
(M)E34	33.2	47.0	57.6	66.5	74.4	31.0	43.8	53.7	62.0	69.4	22.0	31.1	38.1	44.0	49.2
(M)E42	60.9	82.3	98.2	111	123	56.7	76.7	91.5	104	114	40.8	55.2	65.8	74.6	82.2

*Do not use below 1 psi pressure drop, except Type E3. **Capacities are based on 40°F evaporator and 100°F liquid.

Solenoid Valves

Ordering Information

Type Number				Specifications			
"E" Series Extended Connections				Connections Inches	Port Size Inches	MOPD psi AC	WATTS
Without Manual Lift Stem		With Manual Lift Stem					
Normally Closed		Normally Closed					
SF Item #	Mfg. #	SF Item #	Mfg. #				
VAL08094	E3S120	—	—	1/4 ODF Solder	.101	300	10
VAL08095	E3S130	—	—	3/8 ODF Solder	.101	300	10
VAL04244	E5S120	—	—	1/4 ODF Solder	.150	300	10
VAL08096	E5S130	—	—	3/8 ODF Solder	.150	300	10
VAL04496	E6S130	VAL08098	ME6S130	3/8 ODF Solder	3/16	300	10
VAL08097	E6S140	VAL08114	ME6S140	1/2 ODF Solder	3/16	300	10
VAL08115	E9S240	VAL08116	ME9S240	1/2 ODF Solder	9/32	300	15
VAL08117	E10S240	VAL08118	ME10S240	1/2 ODF Solder	5/16	300	15
VAL08196	E10S250	VAL08119	ME10S250	5/8 ODF Solder	5/16	300	15
VAL08197	E14S250	VAL08120	ME14S250	5/8 ODF Solder	7/16	300	15
VAL07010	E19S250	VAL08121	ME19S250	5/8 ODF Solder	19/32	300	15
	E19S270	VAL08122	ME19S270	7/8 ODF Solder	19/32	300	15
VAL08298	E25S270	VAL08123	ME25S270	7/8 ODF Solder	25/32	300	15
VAL08299	E25S290	VAL08124	ME25S290	1-1/8 ODF Solder	25/32	300	15
VAL08309	E34S290	VAL08198	ME34S290	1-1/8 ODF Solder	1	300	15
VAL08125	E34S2110	VAL08126	ME34S2110	1-3/8 ODF Solder	1	300	15
	E42S2130		ME42S2130	1-5/8 ODF Solder	1-5/16	300	15
	E42S2170		ME42S2170	2-1/8 ODF Solder	1-5/16	300	15

Solenoid Parts Kits			
SF Item #	Mfg. #	SF Item #	Mfg. #
KIT09176	KS-B6/E6	KIT08407	KS-B19/E19
KIT09506	KS-B9/E9	KIT06360	KS-B25/E25
KIT09507	KS-B10/E10	KIT08078	KS-B34/E34
KIT09508	KS-B14/E14		KS-B42/E42

Solenoid Coils			
SF Item #	MKC-1	SF Item #	MKC-2
COL12786	120/50-60 CAM	COL12787	120/50-60 CAM
COL11935	120/50-60 JAM	COL12799	120/50-60 JAM
COL12788	208-240/50-60 CAN	COL12790	208-240/50-60 CAN
COL12789	208-240/50-60 JAN	COL12791	208-240/50-60 JAN
COL12795	24/50-60 CAQ	COL12797	24/50-60 CAQ
COL12796	24/50-60 JAQ	COL12798	24/50-60 JAQ
COL12792	DUAL CAU	COL12794	DUAL CAU
COL12793	DUAL JAU	COL12800	DUAL JAU

Catch-All® Filter Driers

Sealed Type – Liquid Line and Suction Line

for Refrigerants 22 – 410A

Features and Benefits

The universal acceptance of the Catch-All Filter-Drier is due to its unique molded porous core, consisting of a blend of highly effective desiccants.

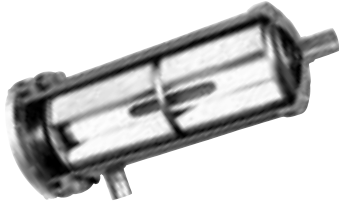
- Moisture – Removes moisture from the refrigerant by adsorbing and retaining it deep within the desiccant granules.
- Foreign Matter – Filters out scale, solder particles, carbon, sludge, dirt, or any other foreign matter with negligible pressure drop. Fine particles that would go through an ordinary strainer are removed down to a minimum size in one pass filtration. The large filtering area of the Catch-All core permits it to collect a large amount of dirt without plug up.
- Acid – Unexcelled in acid removal ability. The hydrochloric, hydrofluoric, and various organic acids are adsorbed and held by the desiccant in a manner similar to the adsorption of moisture. This ability, along with its excellent ability to clean up the oil, is responsible for the excellent field performance in cleaning up severely contaminated systems.

SPECIFICATIONS

Liquid Line Type		Suction Line Type	Connection Size	Volume of Desiccant	Overall Length Inches		Solder Socket Depth Inches	Diameter of Body Inches			
SAE Flare SF Item #	ODF Solder Mfg. #	ODF Solder SF Item #	Inches Mfg. #	Cu. In. SF Item #	SAE Flare Mfg. #	ODF Solder Mfg. #	Inches	Inches			
DHY01094	C-032	DHY01096	C-032-S	—	1/4	3	4.19	3.81	0.38	1.75	
	C-033	DHY01095	C-033-S	—	3/8	3	4.69	3.88	0.44	1.75	
DHY01098	C-052	DHY01224	C-052-S	—	1/4	5	4.75	4.19	0.38	2.44	
	—	DHY01099	C-0525-S	—	5/16	5	—	4.38	0.44	2.44	
DHY01225	C-053	DHY01226	C-053-S	—	3/8	5	5.19	4.31	0.44	2.44	
DHY01100	C-082	DHY01101	C-082-S	—	1/4	9	5.62	5.12	0.38	2.62	
	—	DHY01102	C-0825-S	—	5/16	9	—	5.31	0.44	2.62	
DHY01104	C-083	DHY01228	C-083-S	—	3/8	9	6.06	5.25	0.44	2.62	
	C-084	DHY01227	C-084-S	DHY01103	C-084-S-T-HH	1/2	9	6.31	5.44	0.50	2.62
DHY01111	C-162	DHY01112	C-162-S	—	1/4	16	6.25	5.75	0.38	3.00	
	—	DHY01113	C-1625-S	—	5/16	16	—	5.94	0.44	3.00	
DHY01119	C-163	DHY01229	C-163-S	—	3/8	16	6.75	5.88	0.44	3.00	
DHY01120	C-164	DHY01230	C-164-S	DHY01114	C-164-S-T-HH	1/2	16	6.94	6.00	0.50	3.00
DHY01121	C-165	DHY01118	C-165-S	DHY01115	C-165-S-T-HH	5/8	16	7.25	6.31	0.62	3.00
	—	—	DHY01116	C-166-S-T-HH	3/4	16	—	6.75	0.62	3.00	
	—	C-167-S	DHY01117	C-167-S-T-HH	7/8	16	—	6.93	0.75	3.00	
DHY01127	C-303	—	C-303-S	—	3/8	30	9.69	8.88	0.44	3.00	
DHY01128	C-304	DHY01123	C-304-S	—	1/2	30	9.88	9.00	0.50	3.00	
DHY01129	C-305	DHY01232	C-305-S	DHY01124	C-305-S-T-HH	5/8	30	10.19	9.25	0.62	3.00
	—	—	C-306-S	DHY01231	C-306-S-T-HH	3/4	30	—	9.65	0.62	3.00
	—	DHY01233	C-307-S	DHY01125	C-307-S-T-HH	7/8	30	—	9.80	0.75	3.00
	—	—	C-309-S	DHY01126	C-309-S-T-HH	1-1/8	30	—	9.75	0.96	3.00
	C-413	—	—	—	3/8	41	9.56	—	—	3.50	
DHY01136	C-414	DHY01130	C-414-S	—	1/2	41	9.94	9.05	0.50	3.50	
DHY01137	C-415	DHY01131	C-415-S	—	5/8	41	10.25	9.35	0.62	3.50	
	—	DHY01132	C-417-S	DHY01133	C-417-S-T-HH	7/8	41	—	9.81	0.75	3.50
	—	DHY01134	C-419-S	DHY01135	C-419-S-T-HH	1-1/8	41	—	9.75	0.90	3.50
	—	—	—	DHY01138	C-437-S-T-HH	7/8	48	—	10.34	0.75	4.75
	—	—	—	DHY01139	C-439-S-T-HH	1-1/8	48	—	10.62	0.94	4.75
	—	—	—	DHY01140	C-4311-S-T-HH	1-3/8	48	—	10.94	1.00	4.75
	—	—	—	DHY01141	C-4313-S-T-HH	1-5/8	48	—	10.94	1.06	4.75
	—	DHY01234	C-607-S	DHY01142	C-607-S-T-HH	7/8	60	—	16.00	0.75	3.00
	—	DHY01235	C-609-S	DHY01143	C-609-S-T-HH	1-1/8	60	—	16.00	0.90	3.00
	—	—	—	DHY01106	C-144-S-TT-HH	1/2	14	—	4.14	0.50	4.44
	—	—	—	—	C-145-S-TT-HH	5/8	14	—	4.38	0.66	4.44
	—	—	—	—	C-146-S-TT-HH	3/4	14	—	4.83	0.66	4.44
	—	—	—	—	C-147-S-TT-HH	7/8	14	—	4.97	0.75	4.44
	—	—	—	—	C-149-S-TT-HH	1-1/8	14	—	4.93	0.96	4.44

Listed by Underwriters Laboratories Inc. – Guide SMGT-File No. SA-1756A & B
 Maximum Rated Pressure of 650 psi, except for the C-140 Series which have a maximum rated pressure of 450 psi. See page 10 for nomenclature information.

Catch-All® Filter Driers



Replaceable Core Type

ODF Solder Connections – Refrigerant 22

Features and Benefits

- Molded porous core for maximum contaminant removal. The core cannot swell, powder, or pack — assuring ease of installation and removal.
- Bolt and nut attachment of the end plate provides simple trouble-free installation.

- Internal construction gives a one piece assembly and assures proper core alignment.
- Complete line of fitting sizes — all with copper fittings.
- No plastic parts are used — all internal parts are plated steel.
- Corrosion resistant powder paint protects the exterior of the shell.

SF Item #	Mfg. #	Connections Inches ODF Solder	No. of Cores	Core Part No.	Volume of Desiccant Cu. In.	Mounting Brackets	Overall Length Inches
DHY01144	C-485	5/8	1		48	A-685	9.15
DHY01145	C-485T	5/8	1		48	A-685	9.15
DHY01236	C-487	7/8	1		48	A-685	9.30
DHY01146	C-487-T	7/8	1		48	A-685	9.30
DHY01147	C-489-T	1-1/8	1		48	A-685	9.50
DHY01148	C-4811-T	1-3/8	1		48	A-685	9.60
DHY01149	C-4813-T	1-5/8	1		48	A-685	9.60
DHY01237	C-967	7/8	2		96	A-685	14.84
DHY01150	C-967-T	7/8	2		96	A-685	14.84
DHY01238	C-969	1-1/8	2	COR00102 (RCW-48),	96	A-685	15.04
DHY01151	C-969-T	1-1/8	2	COR00104 (RC-4864),	96	A-685	15.04
DHY01152	C-9611-T	1-3/8	2	or	96	A-685	15.14
DHY01159	C-9613-T	1-5/8	2	COR00068 (RC-4864-HH)	96	A-685	15.14
	C-1449	1-1/8	3		144	A-685	20.58
DHY01161	C-1449-T	1-1/8	3		144	A-685	20.58
DHY01162	C-14411	1-3/8	3		144	A-685	20.68
	C-14411-T	1-3/8	3		144	A-685	20.68
DHY01164	C-19211	1-3/8	4		192	A-685	26.22
DHY01165	C-19211-T	1-3/8	4		192	A-685	26.22
DHY01239	C-19213	1-5/8	4		192	A-685	26.22
DHY01166	C-19213-T	1-5/8	4		192	A-685	26.22
DHY01168	C-30013-T	1-5/8	3		300	A-175-2	27.94
DHY01171	C-30017-T	2-1/8	3	COR00100 (RCW-100),	300	A-175-2	28.06
DHY01173	C-40017-T	2-1/8	4	COR00099 (RC-10098),	400	A-175-2	34.56
DHY01175	C-40021-T	2-5/8	4	or	400	A-175-2	34.57
DHY01177	C-40025-T	3-1/8	4	COR00101 (RC-10098-HH)	400	A-175-2	34.44
DHY01179	C-40029-T	3-5/8	4		400	A-175-2	34.81
DHY01181	C-40033-T	4-1/8	4		400	A-175-2	35.12

Listed by Underwriters' Laboratories Inc. — Guide-SMGT-File No. SA-1756A & B.

Optional Secondary Filter - Order Separately

SF Item #	Filter Part Number	Description	Quantity Required
FLR06106	FS-480	Filter for C-480 Series Shell	1
FLR06107	FS-960	Filter for C-480 Series Shell	1
FLR06108	FS-1440	Filter for C-480 Series Shell	1
FLR06109	FS-19200	Filter for C-480 Series Shell	1

Catch-All® Filter Driers

Liquid Line Ratings and Selection Recommendations Refrigerants 22 & 410A

Mfg. #	Surface Filtering Area ¹ Sq. In.	Ratings at ARI Standard Conditions								Selection Recommendations (Tons)	
		Water Capacity - Drops ²				Refrigerant Flow Capacity ³				Air Conditioning	
		Refrigerant 22 60 PPM		Refrigerant 410A 80 PPM ⁵		Tons at 1 psi D				Field Replacement or Field Built Up Systems	
		75°F	125°F	75°F	125°F	22	134A	404A	410A	22	410A
Sealed Type											
C-032	9	61	50	49	30	1.5	1.3	1.0	1.4	1/2	1/2
C-032-S	9	61	50	49	30	1.5	1.3	1.0	1.4	1/2	1/2
C-033	9	61	50	49	30	3.5	3.2	2.3	3.4	1/2	1/2
C-033-S	9	61	50	49	30	3.8	3.5	2.6	3.7	1/2	1/2
C-052	15	146	119	116	71	2.1	1.9	1.4	2.0	3/4	3/4
C-052-S	15	146	119	116	71	2.1	1.9	1.4	2.0	3/4	3/4
C-0525-S	15	146	119	116	71	3.4	3.1	2.3	3.3	1-1/2	1-1/2
C-053	15	146	119	116	71	4.1	3.8	2.7	4.0	2	2
C-053-S	15	146	119	116	71	4.7	4.3	3.1	4.5	2	2
C-082	21	240	196	191	117	2.1	1.9	1.4	2.0	1	1
C-082-S	21	240	196	191	117	2.1	1.9	1.4	2.0	1	1
C-0825-S	21	240	196	191	117	3.7	3.3	2.4	3.5	1-1/2	1-1/2
C-083	21	240	196	191	117	4.5	4.2	3.0	4.4	2	2
C-083-S	21	240	196	191	117	5.2	4.7	3.4	5.0	2	2
C-084	21	240	196	191	117	8.7	7.9	5.9	8.5	2	2
C-084-S	21	240	196	191	117	9.6	8.8	6.4	9.4	2	2
C-162	33	364	297	289	178	2.1	1.9	1.4	2.0	1-1/2	1-1/2
C-162-S	33	364	297	289	178	2.1	1.9	1.4	2.0	1-1/2	1-1/2
C-1625-S	33	364	297	289	178	3.7	3.3	2.4	3.5	1-1/2	1-1/2
C-163	33	364	297	289	178	4.5	4.2	3.0	4.4	3	3
C-163-S	33	364	297	289	178	5.2	4.7	3.4	5.0	3	3
C-164	33	364	297	289	178	10.1	9.3	6.8	9.8	5	5
C-164-S	33	364	297	289	178	11.0	10.1	7.3	10.7	5	5
C-165	33	364	297	289	178	13.8	12.6	9.2	13.4	5	5
C-165-S	33	364	297	289	178	15.9	14.5	10.6	15.5	5	5
C-303	53	696	567	552	340	4.6	4.2	3.0	4.4	4	4
C-303-S	53	696	567	552	340	5.3	4.7	3.4	5.1	4	4
C-304	53	696	567	552	340	10.1	9.3	6.8	9.8	7-1/2	7-1/2
C-304-S	53	696	567	552	340	11.0	10.1	7.3	10.7	7-1/2	7-1/2
C-305	53	696	567	552	340	14.9	13.6	9.9	14.5	7-1/2	7-1/2
C-305-S	53	696	567	552	340	16.9	15.5	11.3	16.4	7-1/2	7-1/2
C-307-S	53	696	567	552	340	21.6	19.8	14.4	21.0	10	10
C-414	67	936	763	742	458	11.5	10.5	7.6	11.1	7-1/2	7-1/2
C-414-S	67	936	763	742	458	12.4	11.4	8.3	12.1	7-1/2	7-1/2
C-415	67	936	763	742	458	15.8	14.5	10.6	15.4	10	10
C-415-S	67	936	763	742	458	17.5	16.1	11.8	17.1	10	10
C-417-S	67	936	763	742	458	22.1	20.3	14.8	21.5	10	10
C-419-S	67	936	763	742	458	24.3	22.3	16.3	23.7	15	15
C-607-S	106	1392	1134	1104	680	29.1	26.6	19.5	28.4	20	20
C-609-S	106	1392	1134	1104	680	33.2	30.4	22.3	32.4	20	20
Replaceable Core Type With Standard Cores⁴											
C-485	64	347 (1109)	288 (904)	—	—	14.6	13.4	9.8	—	10	—
C-487	64	347 (1109)	288 (904)	—	—	23.9	21.9	16.0	—	15	—
C-489-T	64	347 (1109)	288 (904)	—	—	43.2	39.5	28.9	—	20	—
C-967	128	694 (2218)	576 (1808)	—	—	39.2	35.9	26.2	—	25	—
C-969	128	694 (2218)	576 (1808)	—	—	48.7	44.5	32.6	—	35	—
C-1449	192	1041 (3327)	864 (2712)	—	—	59.2	54.1	39.7	—	40	—
C-14411	192	1041 (3327)	864 (2712)	—	—	67.0	61.3	44.8	—	50	—
C-19211	256	1388 (4436)	1152 (3616)	—	—	84.5	77.3	56.3	—	70	—
C-19213	256	1388 (4436)	1152 (3616)	—	—	99.0	90.6	66.2	—	80	—
C-19217-T	256	1388 (4436)	1152 (3616)	—	—	104	95.1	69.5	—	85	—
C-30013	294	2670 (6786)	1878 (5532)	—	—	112	102	74.5	—	100	—
C-40017	392	3560 (9048)	2504 (7376)	—	—	134	132	96.8	—	130	—

¹ The filtration area is equal to the core surface area plus the large internal surface available for depth filtration.

² 20 drops = 1 gram = 1cc.

³ Based on 86°F Liquid Temperature and a Refrigerant Flow of 2.9 lbs. per minute per ton for Refrigerant 22; 2.8 lbs. per minute per ton 410A.

⁴ High water capacity cores (RCW-48 or RCW-100) ratings are in parenthesis. See page 11 for more information.

⁵ As of this printing, ARI has not established an EPD for 410A.

NOTE: The variation in flow ratings of filter-driers having the same size core and shell is caused by the difference in connection sizes used.

Catch-All Filter Driers

Suction Line Filter-Drier Recommendations for Clean-up after Burnout and New Systems

SF Item #	Mfg. #	Connections Inches ODF Solder	Number of Cores	Core Part Number	Length Inches	Solder Socket Depth Inches	Width Inches	System Capacity in Horsepower Refrigerant 22 & 410A			
								Permanent Installation With Cores	Temporary Installation Cores for clean-up; Filter elements after clean-up		
Sealed Type											
DHY01103	C-084-S-T-HH	1/2			5.44	0.50	2.62	1			
DHY01114	C-164-S-T-HH	1/2			6.00	0.50	3.00	2			
DHY01115	C-165-S-T-HH	5/8			6.31	0.62	3.00	2			
DHY01116	C-166-S-T-HH	3/4			6.75	0.62	3.00	2			
DHY01117	C-167-S-T-HH	7/8			6.93	0.75	3.00	3			
DHY01124	C-305-S-T-HH	5/8			9.25	0.62	3.00	3			
	C-306-S-T-HH	3/4			9.65	0.62	3.00	3			
DHY01125	C-307-S-T-HH	7/8			9.80	0.75	3.00	5			
DHY01126	C-309-S-T-HH	1-1/8			9.75	0.96	3.00	5			
DHY01133	C-417-S-T-HH	7/8			9.81	0.75	3.50	5			
DHY01135	C-419-S-T-HH	1-1/8	Sealed Type Filter-Driers		9.75	0.96	3.50	7-1/2	Select these types on basis of permanent installation		
DHY01138	C-437-S-T-HH	7/8		10.34	0.75	4.75	7-1/2				
DHY01139	C-439-S-T-HH	1-1/8		10.74	0.96	4.75	7-1/2				
DHY01140	C-4311-S-T-HH	1-3/8		10.94	1.00	4.75	10				
DHY01141	C-4313-S-T-HH	1-5/8		10.94	1.06	4.75	10				
DHY01142	C-607-S-T-HH	7/8		16.00	0.75	3.00	5				
DHY01143	C-609-S-T-HH	1-1/8		16.00	0.96	3.00	5				
Sealed Type Compact Style											
DHY01106	C-144-S-TT-HH	1/2				4.14	0.50	4.44		2	
DHY01107	C-145-S-TT-HH	5/8				4.38	0.62	4.44		3	
DHY01108	C-146-S-TT-HH	3/4				4.83	0.69	4.44		3	
DHY01109	C-147-S-TT-HH	7/8				4.97	0.75	4.44		5	
DHY01110	C-149-S-TT-HH	1-1/8				4.93	0.96	4.44		5	
See Page 18 For RSF Shells.											
Replaceable Core Type											
DHY01167	C-30013-G	1-5/8	3			See Page 11		25	50		
DHY01169	C-30017-G	2-1/8	3			See Page 11		25	50		
DHY01172	C-40017-G	2-1/8	4			See Page 11		25	50		
DHY01174	C-40021-G	2-5/8	4			See Page 11		30	60		
DHY01176	C-40025-G	3-1/8	4	COR00101 (RC-10098-HH)		See Page 11		30	60		
DHY01178	C-40029-G	3-5/8	4	or COR0099 (RC-10098)		See Page 11		30	60		
DHY01180	C-40033-G	4-1/8	4			See Page 11		30	60		

Catch-all Suction Line Filter-Drier Selection Instructions

Selection of the proper Catch-All Suction Line Filter-Drier will depend upon the intended usage. Either the "Permanent Installation with Cores" or "Temporary Installation Cores for Clean-up; Filter Elements after Clean-up" column may be used. When the best possible system protection is desired, the "Permanent with Cores" column should be used for selection. These recommendations are made on the basis of a low pressure drop, and as a result the cores can be left in the shell for maximum drying and acid removal when the system returns to normal operation delivering its full rated capacity.

An alternate selection that is satisfactory and less expensive is to install cores temporarily for clean-up, and then remove these cores and install filter elements after clean-up. Because of the larger system capacity, the pressure drop through the temporarily installed cores will be somewhat larger than normal, but still within the limits. After clean-up, the use of filter elements will assure a minimum pressure drop when the system is in normal operation. The low pressure drop through the filter elements assures maximum energy savings during normal operation.

Significance of the Type Number

The letters and numerals in the Catch-All type number each have a significance. The "C" indicates Catch-All. The first two

or three digits indicate cubic inches of desiccant. The last one or two digits indicate fitting size in eighths of an inch. For sealed models, a "S" following the last digit indicates solder fittings, and no letter indicates a flare fitting. Replaceable core models only have solder connections and the "S" is omitted. Examples are: C-083 is 8 cu. in. and 3/8" flare, C-309-S is 30 cu. in. and 1-1/8" solder, C-19213 is 192 cu. in. and 1-5/8" solder.

Other suffix letters indicate special qualities. For example:

- "T" indicates a pressure tap consisting of a Schrader type access valve on the inlet end of the Catch-All.
- "HH" indicates a charcoal style core for wax removal and clean-up after a hermetic motor burnout.

Cores and Filter Elements



Replaceable Cores And Pleated Filter Elements – Order Separately

Cores for replaceable core type filter-driers are molded with the same desiccants that are used in the popular sealed filter-driers.

Cores are individually packed in metal cans, fully activated, and hermetically sealed against moisture and dirt.

Filter elements are dried and packed in individual sealed metal cans. This method of packaging prevents the element from picking up moisture from the atmosphere.

Each can contains a “triple gasket” consisting of a new end plate gasket, an end plate gasket for certain competitive filter-driers, and a core gasket where desired. See the specifications on Page 11 for the number of cores required for each type drier.

COR00104 (RC-4864) — Activated Core Fits types C-480 thru C-19200 Series Shells. A standard core suitable for most installations in the liquid or suction line.

COR00102 (RCW-48) — High Water Capacity Core — Fits types C-480 thru C-19200 Series Shells. Designed specially for use with POE lubricants. Used on systems that have a ruptured water cooled condenser, or that have been exposed to the atmosphere, or for some reason have a high amount of moisture in the system.

COR00068 (RC-4864-HH) — Activated Charcoal Core — Fits types C-480 thru C-19200 Series Shells. Used for wax removal, and for clean-up of systems that have had a hermetic motor burnout.

ELM03572 (RPE-48-BD) — Filter Element Fits types C-480 thru C-19200 Series Shells and Replaceable Suction Filter (RSF) Shells. Used in RSF shells installed in the suction line to obtain the lowest possible pressure drop. In cleaning up a system after a hermetic motor burnout, cores should be used first. After clean-up, the filter element should be installed.

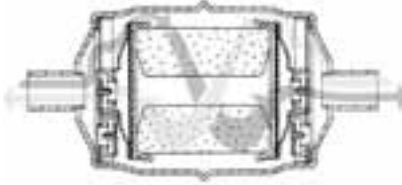
COR00099 (RC-10098) — Activated Core Fits types C-30,000 and C-40,000 Series Shells. A standard core suitable for liquid and suction line applications.

COR00100 (RCW-100) — High Water Capacity Core — Fits types C-30,000 and C-40,000 Series Shells. Designed specially for use with POE lubricants. Used on systems that have a ruptured water cooled condenser, or that have been exposed to the atmosphere, or for some reason have a high amount of moisture in the system.

COR00101 (RC-10098-HH) — Activated Charcoal Core — Fits types C-30,000 and C-40,000 Series Shells. Used for wax removal, and for clean-up of systems that have had a hermetic motor burnout.

FLR01560 (RPE-100) — Filter Element — Fits types C-30,000 and C-40,000 Series Shells. Used in the suction line to obtain the lowest possible pressure drop after cores were used for system clean-up.

Reversible Heat Pump Filter-Driers



Features and Benefits

- A short overall length for easy installation.
- Drier operates in either flow direction with low pressure drop.
- Proven metal check valves used in construction — no synthetic materials.
- The Sporlan dependable molded core used for maximum filtration ability. When the flow direction reverses, dirt already collected remains in the filter-drier.
- A carefully engineered blend of desiccants for maximum water capacity and acid removal ability. The HPC-160-HH Series also has the HH style core with activated charcoal which offers maximum ability to remove oleoresin and other reactive chemical constituents in the oil.
- Same rugged construction as used in the Catch-All.

Specifications - For New Installations And HFC System Use

SF Item #	Mfg. #	Connection Size Inches	Selection Recommendations Tons	Dimensions		Flow Capacity Tons at 1 psi DP Refrigerant		Water Capacity				Liquid Capacity Ounces (Wt.) @ 100°F	
				Overall length Inches	Diameter Inches	R-22	R410A	R-22		R410-A		R-22	R-410A
								Drops at 60 ppm	125°F	Drops at 60 ppm	125°F*		
DHY01182	HPC-103	3/8 Flare	1 thru 5	6.75	3.00	3.4	3.3	215	176	171	105	12.2	10.6
DHY01240	HPC-103-S	3/8 Solder	1 thru 5	5.88	3.00	3.4	3.3	215	176	171	105	12.1	10.6
DHY01183	HPC-104	1/2 Flare	1 thru 5	6.94	3.00	4.5	4.4	215	176	171	105	12.1	10.6
DHY01241	HPC-104-S	1/2 Solder	1 thru 5	6.00	3.00	4.5	4.4	215	176	171	105	12.1	10.6

For Clean-Up After Burnout

SF Item #	Mfg. #	Connection Size Inches	Selection Recommendations Tons	Dimensions		Flow Capacity R-22 Tons at 1 psi DP	Water Capacity Refrigerant 22 Drops at 60 ppm		Liquid Capacity Ounces (Wt.) R-22 @ 100°F
				Overall Length Inches	Diameter Inches		75°F	125°F	
DHY01242	HPC-163-HH	3/8 Flare	1 thru 5	7.78	3.00	3.7	93	81	14.5
DHY01243	HPC-163-S-HH	3/8 Solder	1 thru 5	6.92	3.00	3.7	93	81	14.5
DHY01244	HPC-164-HH	1/2 Flare	1 thru 5	7.95	3.00	4.0	93	81	14.5
DHY01245	HPC-164-S-HH	1/2 Solder	1 thru 5	7.07	3.00	4.0	93	81	14.5
DHY01184	HPC-165-HH	5/8 Flare	1 thru 5	8.28	3.00	4.9	93	81	14.5
DHY01185	HPC-165-S-HH	5/8 Solder	1 thru 5	7.35	3.00	4.9	93	81	14.5

UL and ULc Listed — Guide-SMGT-File No. SA-1756A & B.

Core volume is 10 cubic inches for HPC-100 Series and 14 cubic inches for the HPC-160-HH Series. Core surface filtering area is 18 sq. in. for the HPC-100 Series and 26 sq. in. for the HPC-160-HH Series. HPC-100 Series are rated for 650 psig; HPC-160-HH have a 500 psig rating.

*As of this printing, ARI has not established an EPD for R-410A.

Suction Filters



Listed by Underwriters' Laboratories, Inc. Guide SMGT-File No. SA-1756A & B.



Suction filter with the Exclusive Bi-directional Feature

Features and Benefits

- Protects the compressor from dirt
- A relief device opens if the filter plugs
- Suitable for use with all brazing alloys
- Maximum corrosion resistance
- Full flow design for low pressure drop
- Complete line of sizes

Sporlan offers an exclusive concept in Suction Filter design — a filter which is bi-directional. When flow is in one direction, the bypass relief feature is active. If the pressure drop across the element becomes excessive, the bypass relief will open slightly to maintain sufficient gas flow and assure proper cooling of the hermetic motor.

When the Suction Filter is installed with flow in the opposite direction, the bypass relief feature is inactive and will never open, regardless of the increase in pressure drop.

The “-T” in the type number indicates that these models are equipped with an access valve to permit pressure drop readings. The access valve will be operational provided the Suction Filters are installed with the bypass feature inactive.

Suction Filters

Specifications

Type				Connections Inches	Filter Area Sq. IN.	Overall Length	Dimensions Inches	
Without Access Valve SF Item #	Mfg. #	With Access Valve SF Item #	Mfg. #				Socket Depth	Shell Diameter
Types with bypass relief feature (Bi-directional Flow)								
FLR06116	SF-283F	—	—	3/8 SAE Flare	28	8.78	—	3.00
—	—	FLR06117	SF-285-T	5/8 ODF Solder	28	8.34	0.62	3.00
—	—	FLR01121	SF-286-T	3/4 ODF Solder	28	8.79	0.69	3.00
—	—	FLR06110	SF-287-T	7/8 ODF Solder	28	8.93	0.75	3.00
—	—	FLR01069	SF-289-T	1-1/8 ODF Solder	28	9.51	0.91	3.00
—	—	FLR06118	SF-489-T	1-1/8 ODF Solder	48	12.42	0.91	3.00
—	—	FLR06112	SF-4811-T	1-3/8 ODF Solder	48	13.10	0.97	3.00
—	—	FLR01080	SF-4813-T	1-5/8 ODF Solder	48	13.44	1.09	3.00
Types without bypass relief feature (Single Flow Direction)								
FLR06113	SF-114	—	—	1/2 ODF Solder	11	4.36	0.50	2.00
FLR06111	SF-114F	—	—	1/2 SAE Flare	11	5.25	—	2.00
FLR06114	SF-115	—	—	5/8 ODF Solder	11	4.60	0.62	2.00
FLR06115	SF-115F	—	—	5/8 SAE Flare	11	5.56	—	2.00
—	—	—	SF-6417-T	2-1/8 ODF Solder	388	10.94	1.24	4.75
—	—	—	SF-6421-T	2-5/8 ODF Solder	388	10.94	1.38	4.75

Selection Recommendations

Type Number			Connections Inches	Flow Capacity in Tons Evaporator Temperature 40°F Pressure Drop 3	
Without Access Valve	Mfg. #	With Access Valve		Refrigerant 22	Nominal System Horsepower
	Mfg. #	Mfg. #		Refrigerant 22	Refrigerant 22
	SF-114	—	1/2 ODF	2.4	1
	SF-114F	—	1/2 SAE	2.1	1
	SF-115	—	5/8 ODF	4.1	2
	SF-115-F	—	5/8 SAE	3.7	2
	SF-283F	—	3/8 SAE	2.1	1
	—	SF-285-T	5/8 ODF	6.4	4
	—	SF-286-T	3/4 ODF	8.6	5
	—	SF-287-T	7/8 ODF	11.1	7-1/2
	—	SF-289-T	1-1/8 ODF	14.8	7-1/2
	—	SF-489-T	1-1/8 ODF	16.0	10
	—	SF-4811-T	1-3/8 ODF	18.4	12
	—	SF-4813-T	1-5/8 ODF	21.6	15
	—	SF-6417-T	2-1/8 ODF	91.1	55
	—	SF-6421-T	2-5/8 ODF	119.0	60

Suction Filters



Replacement Suction Filter

The Replaceable Suction Filter shell, used with ELM03572 (RPE-48-BD) pleated filter element, is designed to be installed in the suction line of new systems to remove resident contaminants.

Features and Benefits:

- Low pressure drop
- Can be used with desiccant cores for clean-up after burnout
- Various fitting sizes up to 3-1/8" line size
- Access valve supplied for pressure drop measurement or charging

How it's used – Sporlan Replaceable Suction Filters are installed in the suction line of air conditioning systems to remove contaminants that may be in the system at start-up.

The Replaceable Suction Filter has large fittings permitting the use of a small shell on a system with a large line size, resulting in considerable economy. The angle construction is suitable for flow in either direction, which results in easy installation even on compact racks.

The Replaceable Suction Filters should be used with cores for cleaning up a system after a hermetic motor burnout. Select the COR00113 (RC-4864), COR00068 (RC-4864-HH) or COR00102 (RCW-48) replaceable cores. After clean-up, install ELM00665 (RPE-48-BD) elements in the shells.

Selection – The table below gives information for choosing the proper model for a given system. The filter elements are supplied in hermetically sealed metal cans.

Selection Recommendations

SF Item #	Mfg. #	Connections Inches ODF Solder	Maximum System Size - Horsepower		No. of Filter Elements	No. of Cores	Overall Length Inches
			New Systems (with RPE-48-BD) elements Refrigerant 22	①Temporary Application, Clean-Up After Burnout (with cores) Air Conditioning Refrigerant 22			
FLR06119	RSF-487-T	7/8	10	20	One ELM00665 (RPE-48-BD)	One COR00013 (RC-4864) or COR00068 (RC-4864-H)	9.30
FLR06120	RSF-489-T	1-1/8	15	20			9.37
FLR06121	RSF-4811-T	1-3/8	20	25			9.60
DHY01086	RSF-4813-T	1-5/8	25	25			9.60
FLR06122	RSF-4817-T	2-1/8	35	30			9.37
FLR00844	RSF-4821-T	2-5/8	50	30	Two ELM00665 (RPE-48-BD)	Two COR00013 (RC-4864) or COR00068 (RC-4864-H)	9.75
FLR06123	RSF-9617-T	2-1/8	40	40			14.96
FLR06124	RSF-9621-T	2-5/8	50	50			15.43
FLR06125	RSF-9625-T	3-1/8	80	50			15.12

1. Safty screen P/N: 6171-S is required when cores are used in the RSF shell. Remove the screen when RPE-48-BD elements are used.
UL and ULc Listed — Guide-SMGT-File No. SA-1756A & B.

Moisture & Liquid Indicators



SA-12FM



SA-14U



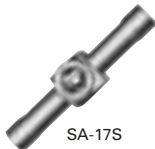
SA-13UU



SA-13FU



SA-14SU



SA-17S



SA-217

See-All® Moisture and Liquid Indicator

U.S. PATENT NO. 2,844,026

Features and Benefits

- The See-All Moisture and Liquid Indicator provides a true moisture indication for Refrigerant 22 and 410A. The dark green indicates dry and a bright yellow indicates wet. The one indicator avoids the confusion found in models with two elements. You cannot pick the wrong element when checking the moisture content of the system.
- Reliable and accurately calibrated color change points. The See-All Moisture and Liquid Indicator is accurately calibrated in parts per million of moisture for each refrigerant. All moisture indicators change color on the basis of relative saturation of the refrigerant. Therefore, liquid line temperature must be considered if an accurate calibration is to be obtained. A color chart is part of the label, for easy comparison.
- Color changes are easily distinguished and reversible. The indicator's color differs so widely between wet and dry conditions that there is no possibility of confusion between the two. Colors will reverse as often as moisture concentration in the system changes.

- Large full view sight glass. The See-All Moisture and Liquid Indicator has an extra large crystal clear sight glass for viewing the refrigerant. Bubbles indicate a shortage of refrigerant or a restriction in the liquid line.
- Indicator protected from discoloration and dirt. The indicator is protected by a filter pad and screen. This prevents washing of the indicator by the refrigerant and protects it from system contamination and turbulence.
- Replaceable indicator element. The color indicator paper can be changed on the new fused glass models without removing the See-All from the line. Replacement is thru the bottom (see SA-14SU at left). Request the K-SA-4 kit.
- Disassembly of the smaller sizes not required. The extended steel fittings on solder models in the smaller sizes make it unnecessary to disassemble for installation since steel conducts only one eighth as much heat as copper.
- Double duty plastic cap is supplied to keep the glass free from dust, dirt, and grease. It also permits the service engineer to use his own discretion concerning instructions to his customers on observing the See-All Moisture and Liquid Indicator.

Moisture & Liquid Indicators

SF Item #	Mfg. #	Type	Connection Size Inches	Overall Length Inches
GLS00901	SA-12	Male Flare	1/4	2.87
GLS00903	SA-13	Male Flare	3/8	3.37
GLS00909	SA-14	Male Flare	1/2	3.81
GLS00915	SA-15	Male Flare	5/8	4.13
GLS00902	SA-12FM	Female & Male Flare	1/4	2.56
GLS00904	SA-13FM	Female & Male Flare	3/8	2.97
GLS00910	SA-14FM	Female & Male Flare	1/2	3.44
GLS00907	SA-13U	Male Flare x Swivel Nut	3/8	3.64
GLS00913	SA-14U	Male Flare x Swivel Nut	1/2	4.13
GLS00917	SA-14U	Male Flare x Swivel Nut	5/8	4.44
GLS00908	SA-13UU	Swivel Nut x Swivel Nut	3/8	3.95
GLS00914	SA-14UU	Swivel Nut x Swivel Nut	1/2	4.50
GLS00918	SA-15UU	Swivel Nut x Swivel Nut	5/8	4.75
GLS00905	SA-13FU	Female Flare x Swivel Nut	3/8	3.19
GLS00911	SA-14FU	Female Flare x Swivel Nut	1/2	3.75
GLS00906	SA-13SU	Swivel Nut x ODF Solder	3/8	4.19
GLS00912	SA-14SU	Swivel Nut x ODF Solder	1/2	4.62
GLS00916	SA-15SU	Swivel Nut x ODF Solder	5/8	4.89
GLS00150	SA-12S	ODF Solder	1/4	4.62
GLS00852	SA-13S	ODF Solder	3/8	4.62
GLS00853	SA-14S	ODF Solder	1/2	4.62
GLS00830	SA-15S	ODF Solder	5/8	4.87
GLS00831	SA-17S	ODF Solder	7/8	6.31
GLS00832	SA-19S	ODF Solder	1-1/8	6.31
GLS00919	SA-211*	ODF Solder	1-3/8	6.31
GLS00174	SA-213*	ODF Solder	1-5/8	7.97
GLS00920	SA-217*	ODF Solder	2-1/8	7.87

Listed by Underwriters' Laboratories, Inc. - Guide SEYW - File No. SA3182
 Maximum Rated Pressure - 650 psi. Overall width is: 1.31" for 1/4" and 3/8" sizes, 1.58" for 1/2" and 5/8" sizes, and 1.38" for 7/8" and 1-1/8" sizes. Most solder connections can be used as male fittings as well as female fittings. The 1/4" ODF is 3/8" ODM, the 3/8" ODF is 1/2" ODM, the 1/2" ODF is 5/8" ODM, and the 5/8" ODF is 3/4" ODM. Models with female flare and/or swivel nut connections are supplied with a copper gasket in the fitting.
 *These models have copper connections and feature a removable element cartridge — for replacement cartridge specify AC-20.

Moisture Content ppmW - parts per million of water			
75°F			
Refrigerant	Green - DRY	Chartreuse - CAUTION	Yellow - WET
22	Below 30	30-90	Above 90
410A	Below 75	75-150	Above 150

NOTE: Change or add Catch-All® Filter-Drier when indicator paper turns chartreuse.

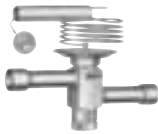
Discharge Bypass Valves



ADRHE-6



ADRI



DRHE-6



SHGB-15



SHGB-8

and Listed or Recognized

Features and Benefits

The Sporlan line of discharge bypass valves are designed to provide an economical method of compressor capacity control in place of cylinder unloaders or to handle unloading requirements below the last step of cylinder unloading. These modulating control valves automatically bypass the required amount of discharge gas to the low side to maintain the desired minimum evaporator pressure. The valves are applicable on any refrigeration or air conditioning system that operates during periods of low load, which can result in coil icing or short cycling. These valves respond to downstream pressure changes and open when the evaporator pressure falls below the valve setting. At normal loads and evaporator conditions, the valve remains closed and the system operates in a conventional manner.

The DR line of valves consists of three basic types of valves: the adjustable models, the adjustable remote bulb models, and the non-adjustable models.

The SHGB valves are adjustable and pilot operated with a solenoid stop feature that eliminates the need for a hot gas solenoid valve. They were developed for use on larger capacity systems.

Application

The discharge bypass valve is normally applied in a branch line off the discharge line. To allow system pump down control, a solenoid valve or hand valve must be installed upstream of the discharge DR type bypass valves. The bypassed hot gas can enter the low side at several locations; however, two of the possible locations are preferred because of superior operating performance: into

the side connection of a Sporlan side connection distributor or directly into the suction line. By using the side connection distributor method, the system TEV will act as a desuperheating valve to keep the compressor suction temperature below the recommended maximum temperature published by the compressor manufacturer. When the hot gas is bypassed directly into the suction line, an auxiliary desuperheating TEV may be required.

Selection and Capacity Ratings

The capacities given in the table below are valve hot gas capacities and not the capacities of the system on which the valve is to be applied. To select a valve, first determine the compressor capacity at the minimum allowable evaporating temperature. Then the discharge bypass valve must supply the difference between this compressor capacity and the minimum evaporator load at which the system is to be operated. The valve pressure setting will be that pressure at which the bypass valve must start to open.

Connections – (standard connections are in **Bold** type).

ADRS(E)-2 – 3/8", 1/2", 5/8" ODF Solder or 3/8", 1/2", 5/8" SAE Flare

ADRP(E)-3 – 1/2", 5/8" ODF Solder on 1/2", 5/8" SAE Flare

ADRHE-6 & DRHE-6 – 5/8", 7/8", 1-1/8" ODF Solder

SHGB(E)-8 – 7/8" ODF, 1-1/8" ODF Solder

SHGB(E)-15 – 1-1/8", 1-3/8" ODF Solder

Valves with ODF solder connections are supplied standard with 1/4" ODF external equalizer, 1/4" SAE Flare external equalizer available on special order. Pilot operated models are supplied with 1/4" SAE external equalizer.

Discharge Bypass Valves

Discharge Bypass Valve Capacities – Tons

Capacities based on 6°F evaporator temperature change from closed to rated opening (does not apply to pilot operated models), discharge temperature 30°F above isentropic compression, 100°F condensing temperature, 0°F subcooling, 25°F

superheat at the compressor and includes both the hot gas bypassed and liquid refrigerant for desuperheating, regardless of whether the liquid is fed through the system thermostatic expansion valve or auxiliary desuperheating thermostatic expansion valve.

Refrigerant	Minimum Allowable Evaporator Temperature	Valve Type & Adjustment Range (psig)					
		ADRS-2 ADRSE-2	ADRP-3 ADRPE-3	ADRHE-6	DRHE-6 (Adjustable "Remote Bulb" Model)	SHGB-8 SHGBE-8	SHGB-15 SHGBE-15
		0/80	0/80	0/80	55/70	0/100	0/75
22	40	3.51	5.99	9.16	19.8	15.7	58
26	26	3.57	6.26	9.90	16.9	15.9	62

Discharge Bypass Valves

SF Item #	Valve Type & Adjustment (psig)	Connections
VAL08253	ADRS-2 0/30	3/8 ODF
VAL08254	ADRS-2 0/30	1/2 ODF
VAL08255	ADRS-2 0/30	5/8 ODF
VAL08256	ADRS-2 0/30	1/2 SAE
VAL08262	ADRS-2 0/80	1/2 ODF
VAL08263	ADRS-2 0/80	5/8 ODF
VAL08264	ADRS-2 0/80	3/8 SAE
VAL08265	ADRS-2 0/80	1/2 SAE
VAL08261	ADRS-2 0/80	3/8 ODF
VAL08257	ADRSE-2 0/30	3/8 ODF
VAL08258	ADRSE-2 0/30	1/2 ODF
VAL08259	ADRSE-2 0/30	5/8 ODF
VAL08260	ADRSE-2 0/30	1/2 SAE
VAL08266	ADRSE-2 0/80	3/8 ODF
VAL08267	ADRSE-2 0/80	1/2 ODF
VAL08268	ADRSE-2 0/80	5/8 ODF
VAL08269	ADRSE-2 0/80	3/8 SAE
VAL08270	ADRSE-2 0/80	1/2 SAE
VAL08271	ADRSE-2 0/80	5/8 SAE
VAL08272	ADRP-3 0/30	5/8 ODF
VAL08275	ADRP-3 0/80	1/2 ODF
VAL08276	ADRP-3 0/80	5/8 ODF
VAL08277	ADRP-3 0/80	5/8 SAE
VAL08273	ADRPE-3 0/30	1/2 ODF
VAL08274	ADRPE-3 0/30	5/8 ODF
VAL08278	ADRPE-3 0/80	1/2 ODF
VAL08279	ADRPE-3 0/80	5/8 ODF
VAL08280	ADRPE-3 0/80	5/8 SAE
VAL08281	ADRHE-6 0/30	5/8 ODF
VAL08282	ADRHE-6 0/30	7/8 ODF
VAL08283	ADRHE-6 0/30	1-1/8 ODF
VAL08284	ADRHE-6 0/80	5/8 ODF
VAL08285	ADRHE-6 0/80	7/8 ODF
VAL08286	ADRHE-6 0/80	1-1/8 ODF
Less Coil		
VAL08289	SHGB-8 0/100,	7/8 ODF
VAL08290	SHGB-8 0/100,	1-1/8 ODF
VAL08291	SHGB-15 0/75,	1-1/8 ODF
VAL08292	SHGB-15 0/75,	1-3/8 ODF
VAL08287	SHGBE-8 0/100,	1-1/8 ODF
VAL08288	SHGBE-8 0/100,	7/8 ODF
VAL08293	SHGBE-15 0/75,	1-1/8 ODF
VAL08294	SHGBE-15 0/75,	1-3/8 ODF



Literature Order Number	RSP-PRC029-EN
Filing Hierarchy	Service Products/Refrigeration Components
Date	July 2004
Supersedes	New
Stocking Location	Inland

Trane has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice.